

**APPARATUS AND METHOD OF BUILDING AN ELECTRONIC
DATABASE FOR RESOLUTION SYNTHESIS**

ABSTRACT OF THE DISCLOSURE

5 An electronic database for image interpolation is generated by a computer.
The computer generates a low-resolution image from a training image, a plurality
of representative vectors from the low-resolution image, and a plurality of
interpolation filters corresponding to each of the representative vectors. The
interpolation filters and the representative vectors are generated off-line and can
10 be used to perform image interpolation on an image other than the training image.
The database can be stored in a device such as computer or a printer.